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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/990,204	11/21/2001	Ken Kuwabara	JNP-0126	3547

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EXAMINER

KHOO, FOONG LIN

ART UNIT	PAPER NUMBER
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2664

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.		Applicant(s)	
	09/990,204		KUWABARA ET AL.	
	Examiner		Art Unit	
	F. Lin Khoo		2664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-20 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Oath/Declaration

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

2. The oath or declaration is defective because:

It does not identify the citizenship of one (Lin, Steven) of the inventors.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 2, 6, 7, 10, 13, 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Zhang et al. (U.S. Patent No. 6,396,833)

Regarding Claim 1, Zhang et al. discloses in a router containing a plurality of forwarding tables (per user routing tables) , a method of packet forwarding, comprising: receiving a packet at an ingress interface (col 2, lines 49-50);

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classifying the received packet based on at least a first field value (Fig. 4 (step 150) source address) contained in the header of the packet (Fig. 4 (step 152)); associating one of the plurality of forwarding tables to the packet according to its classification (Fig. 4 (step 152), col 4, lines 44-49 searches through one or more of the per-user routing tables based on user classification); performing a lookup operation in the associated forwarding table according to at least a second field value (Fig. 4 (step 154) destination address) contained in the header of the packet (Fig. 4 (step 156), col 4, lines 50-54); determining an egress interface based on the lookup operation (Fig. 4 (step 158), col 4, lines 54-56); and transmitting the received packet from the determined egress interface (Fig. 4 (step 160), col 4, lines 56-58).

Regarding Claim 2, Zhang et al. discloses wherein the step of classifying comprises the substep of determining whether the first field value meets one or more criteria ((Fig. 4 (step 152), col 4, lines 44-49 searches through one or more of the per-user routing tables based on user classification).

Regarding Claim 6, Zhang et al. discloses in a networking device, a method of forwarding packets, comprising:
classifying a received packet based on information contained in the packet (col 2, lines 49-57)

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selecting one of a plurality of forwarding tables based on the classification of the received packet (Abstract, lines 4-7);

performing a lookup operation using the selected forwarding table (col 4, lines 50-54);

and

determining an egress interface for the packet based on the performed lookup operation (Fig. 4 (step 158), col 4, lines 54-56).

Regarding Claim 7, Zhang et al. discloses a method of configuring a networking device, comprising:

generating a first forwarding table (Fig. 4, (steps 150 and 152) wherein the first forwarding table can be associated with the first user table) ;

generating a second forwarding table (Fig. 4, (steps 150 and 152) wherein the second forwarding table can be associated with the second user table);

programming a filter to initiate a lookup operation in the first forwarding table if a first field value (Fig. 4, source address) of a received packet meets one or more conditions of a first set of conditions (first set of conditions can be associated with the criteria of meeting the source address of the first user);

programming the filter to initiate a lookup operation in the second forwarding table if the first field value (Fig. 4, source address) meets one or more conditions of a second set of conditions (second set of conditions can be associated with the criteria of meeting the source address of the second user).

Regarding Claim 10, Zhang et al. discloses a method of configuring a networking device, comprising:

generating a first forwarding table (Fig. 4, (steps 150 and 152) wherein the first forwarding table can be associated with the first user table);

generating a second forwarding table (Fig. 4, (steps 150 and 152) wherein the second forwarding table can be associated with the second user table);

programming a filter to perform a lookup operation in the first forwarding table if a first field value (Fig. 4, source address) of a received packet meets one or more conditions of a first set of conditions (first set of conditions can be associated with the criteria of meeting the source address of the first user);

programming the filter to initiate a lookup operation in the second forwarding table if the first field value does not meet one or more conditions of the first set of conditions (if the condition of the source address for the first user is not met by searching through one or more per-user routing tables (i.e., not meeting one or more conditions of the first set of conditions), then the lookup operation based on the source address for the second user table can be initiated).

Regarding Claim 13, Zhang et al. discloses a memory (gateway) for storing a first forwarding table and a second forwarding table (it is inherent that the gateway is a network device having memory capable of storing the first and second forwarding tables, wherein the first forwarding table can be associated with the first user table and

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the second forwarding table can be associated with the second user table - col 2, lines 49-50);

a filter programmed to initiate a lookup operation in the first forwarding table if a first field value (Fig. 4, source address) of a header contained in a received packet meets one or more conditions of a first set of conditions (first set of conditions can be associated with the criteria of meeting the source address of the first user) and to initiate a lookup operation in the second forwarding table if the first field value meets one or more conditions of a second set of conditions (second set of conditions can be associated with the criteria of meeting the source address of the second user).

Regarding Claim 17, Zhang et al. discloses a memory (gateway) for storing a first forwarding table and a second forwarding table (it is inherent that the gateway is a network device having memory capable of storing the first and second forwarding tables, wherein the first forwarding table can be associated with the first user table and the second forwarding table can be associated with the second user table - col 2, lines 49-50);

a filter programmed to initiate a lookup operation in the first forwarding table if a first field value (Fig. 4, source address) of a header contained in a received packet meets a first set of conditions (first set of conditions can be associated with the criteria of meeting the source address of the first user) and to initiate a lookup operation in the second forwarding table if the first field value does not meet one or more conditions of the first set of conditions (if the condition of the source address for the first user is not

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met by searching through one or more per-user routing tables (i.e., not meeting one or more conditions of the first set of conditions), then the lookup operation based on the source address for the second user table can be initiated).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4, 5, 8, 9, 11, 12, 14, 15, 18, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al. (U.S. Patent No. 6,396,833) in view of Nomura et al. (U.S. Pub No. 2001/0019554).

Regarding Claims 4 and 5, Zhang et al. fails to disclose wherein the first forwarding table contains an entry corresponding to a first label switched path (claim 4) and a second label switched path (claim 5). Regarding Claims 8 and 11, Zhang et al. fails to disclose wherein the step of generating a first forwarding table comprises the substep of generating a first forwarding table containing an entry corresponding to a first label switched path. Regarding Claims 9 and 12, Zhang et al. fails to disclose wherein the step of generating a second forwarding table comprises the substep of generating a second forwarding table containing an entry corresponding to a second label switched

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path. Regarding Claims 14 and 18, path Zhang et al. fails to disclose wherein the first forwarding table contains an entry corresponding to a first label switched path.

Regarding Claims 15 and 19, Zhang et al. fails to disclose wherein the second forwarding table contains an entry corresponding to a second label switched path.

Nomura et al. discloses a label switch network which includes the mapping of IP packets (L3) sent by an IP network adjacent to the MPLS network with LSPs (Label Switched Paths) of L2 paths (paragraph [0067]). Therefore, it would have been obvious to one skilled in the art to use the label switch path method as taught by Nomura et al. in the per-user routing tables used by Zhang et al. for transferring IP packets and can perform IP level (layer 3: L3) routing by a switching process in lower layers (layer 2:L2) such as ATM (Asynchronous Transfer Mode), frame intermediate and Ethernet to provide service regarding traffic engineering, such as setting up optimal routes for every flow (setting up explicit routes in consideration of QoS (Quality of Service), and aggregates of IP flows), traffic load sharing and improving failure tolerance by setting up redundant links in the label switch networks .

7. Claims 16 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al. (U.S. Patent No. 6,396,833) in view of Bitz et al. (U.S. Patent No. 5,479,401).

Regarding Claims 16 and 20, Zhang et al. does not disclose a plurality of ingress interfaces for receiving packets, a plurality of egress interfaces for transmitting packets,

and wherein each of the lookup operations results in an identification of an egress interface from which the received packet is to be transmitted. Bitz et al. discloses a network device with a plurality of ingress interfaces for receiving packets (Fig. 3, elements 26-L, col 4, lines 15-16), a plurality of egress interfaces for transmitting packets (Fig. 3, elements 28-P, col 4, lines 16-18), wherein each of the lookup operations results in an identification of an egress interface from which the received packet is to be transmitted (col 4, lines 18-36). Therefore, it would have been obvious to one skilled in the art to use the network device as taught by Bitz et al. in the system of Zhang et al. to provide an alternative gateway between users at each of the plurality of ingress interfaces and simultaneous connection to multiple networks at each of the plurality of egress interfaces.

Allowable Subject Matter

8. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6,674,743 to Amara et al. provides a method and apparatus for providing policy-based services for internal applications.

U.S. Patent No. 6,088,356 to Hendel et al. relates in general to packet forwarding within a network and, in particular, to a system and method for forwarding packets using multi-layer information.

U.S. Patent No. 6,205,488 to Casey et al. discloses a virtual private network which includes multiple routers connected to the shared MPLS network and is configured to dynamically distribute VPN information across the network.

U.S. Patent No. 6,359,879 to Carvey et al. relates to an internet router which treats plural output ports with a common destination as composite port and using IP address in the routing table to determine a composite trunk to forward the packet.

U.S. Publication No. 2003/0063613 to Carpini et al. relates to a system and method for path restoration in a label switched communication network.

The five prior arts are cited to further show the state of the art with respect to packet forwarding techniques applied to various types of communication network.

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to F. Lin Khoo whose telephone number is 571-272-5508.

The examiner can normally be reached on flex time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 571-272-3134. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'W. Chin', with a long horizontal flourish extending to the right.

WELLINGTON CHIN
SUPERVISORY PATENT EXAMINER